

THEREFORE, WE CLAIM:

1. An electrocoat composition comprising:
 - a) an electrodepositable resin and
 - 5 b) a solid particulate polyacrylate, a solid particulate aliphatic polyurethane/polyurea copolymer or mixtures thereof.
2. The composition of claim 1 wherein b) is a particulate aliphatic polyurethane/polyurea copolymer.
- 10 3. The composition of Claim 1, wherein b) is a particulate polyacrylate.
4. The composition of Claim 3, wherein the polyacrylate is
- 15 polymethyl methacrylate.
5. The composition of Claim 1, wherein the average particle size is less than or equal to 25 microns.
- 20 6. The composition of Claim 5, wherein the average particle size is 10 microns, +/- 5 microns.
7. The composition of Claim 1, wherein the weight percent of b) is between about 0.01 and 30 based on the total weight of the composition.
- 25 8. The composition of Claim 7, wherein the total weight of b) is between 10 and 25.
9. The composition of Claim 1, wherein said electrodepositable
- 30 resin is cationic.

10. The composition of Claim 9 wherein said resin is a sulfonium acrylic resin.

5 11. The composition of Claim 1, wherein b) is contained in an electrocoat paste prior to incorporation into the composition.

12. The composition of Claim 11, wherein the electrocoat paste comprises an acrylic grind vehicle.

10 13. The composition of Claim 11, wherein the electrocoat paste comprises an epoxy grind vehicle.

15 14. The composition of Claim 1, wherein the density of the particles is between 1 and 1.5.

15. The composition of Claim 1, wherein less than 1 percent of the particles are larger than 50 microns.

20 16. The composition of Claim 15, wherein less than 1 percent of the particles are larger than 25 microns.

25 17. The composition of Claim 1, wherein at least 70 percent of the particles are between 2 and 15 microns.

18. An electrocoat paste suitable for use in an electrocoat composition, comprising:

- a) a grind vehicle; and
 - b) a solid particulate polyacrylate, a solid particulate aliphatic polyurethane/polyurea copolymer, or mixtures thereof.
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19. The electrocoat paste of Claim 18, wherein b) is a particulate polyacrylate.

5 20. The electrocoat paste of Claim 18, wherein b) is a particulate aliphatic polyurethane/polyurea copolymer.

21. The electrocoat paste of Claim 19, wherein b) is a particulate polymethyl methacrylate.

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22. The electrocoat paste of Claim 18, comprising an acrylic grind vehicle.

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23. The electrocoat paste of Claim 18, comprising an epoxy grind vehicle.

24. The electrocoat paste of Claim 18, further comprising a pigment.

20 25. An electrocoat composition comprising a resinous phase dispersed in an aqueous medium, wherein the resinous phase comprises the composition of Claim 1.

25 26. The composition of Claim 25, further comprising one or more of pigments, surfactants, wetting agents, coalescing solvents, catalysts, plasticizers, defoamers, anti-cratering agents, and light stabilizers.

27. A method for electrocoating a conductive substrate comprising applying to said substrate a coating derived from the composition of Claim 1.

28. The method of Claim 27, wherein said coating has a dry film thickness of 3.0 mils or less.

29. The method of Claim 28, wherein the coating has a dry film
5 thickness of between 0.6 and 1.4 mils.

30. The method of Claim 27, wherein the coating is a topcoat.

31. The method of Claim 27, wherein the coating is a primer.
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32. A method for reducing the gloss of a coating deposited on a substrate by electrodeposition in which an effective amount of either a solid particulate polyacrylate, a solid particulate aliphatic polyurethane/polyurea copolymer, or both, is added to a composition that is subjected to the
15 electrodeposition process.

33. The method of Claim 32, wherein a particulate aliphatic polyurethane/polyurea copolymer is added.

34. The method of Claim 32, wherein a particulate polyacrylate is added.
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35. The method of Claim 34, wherein the particulate polyacrylate is polymethyl methacrylate.
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36. The method of Claim 32, wherein the gloss of the coating is reduced to 70 or less, as determined using a 60° meter.

37. The method of Claim 36, wherein the gloss is reduced to less
30 than 40, as determined using a 60° meter.

38. A method for making an electrocoat composition having a sedimentation rate lower than 25 mg/hr comprising adding a solid particulate polyacrylate, a solid particulate aliphatic polyurethane/polyurea copolymer, or
5 both, to the electrocoat composition.

39. The method of Claim 38, wherein a particulate aliphatic polyurethane/polyurea copolymer is added.

10 40. The method of Claim 38, wherein a particulate polymethyl methacrylate is added.

41. An electrocoat composition having a sedimentation rate of lower than 50 mg/hour, in which the coating deposited from said composition has a
15 60° gloss of 70 or less and a gloss retention of at least 50 percent following 300 hours of QUV exposure.

42. The composition of Claim 41, wherein the sedimentation rate is lower than 25 mg/hour.
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43. The composition of Claim 41, wherein the 60° gloss is less than 40.

44. The composition of Claim 41, wherein the gloss retention is at
25 least 70 percent.

45. The composition of Claim 1, wherein said electrodepositable resin is anionic.